

CLAIMS

1. A method for control of an automatic transmission (3) of a vehicle provided with an engine (2) that drives the transmission (3), in which method:

- a downhill-travel situation of the vehicle is detected and;
- a transmission ratio is chosen such that the engine (3) absorbs energy,

characterized in that a longitudinal speed ( $V_{min}$ ) at the beginning of downhill travel is stored in memory when the vehicle begins a downhill-travel situation and,

- as long as the vehicle is in the downhill-travel situation, the current speed ( $V$ ) of the vehicle is compared with the speed ( $V_{min}$ ) at the beginning of downhill travel in such a way that:
- if the current speed ( $V$ ) exceeds the speed ( $V_{min}$ ) at the beginning of downhill travel by a predetermined deviation ( $VS$ ), the transmission is then instructed to initiate downshifting.

2. A control method according to claim 1, characterized in that the downhill-travel situation is detected if the slope ( $P$ ) is greater than a predetermined threshold slope ( $PS$ ), if the power demand ( $Acc$ ) of the engine is smaller than a predetermined power threshold ( $AccS$ ), and braking is absent.

3. A control method according to claim 1, characterized in that it includes an additional test step (28) verifying that, before downshifting is initiated, the energy-absorption capacity of the engine is smaller than a predetermined power threshold.

4. A control method according to claim 3, characterized in that the absorption capacity of the engine is determined by the engine speed (NTA).

5. A control method according to claim 3, characterized in that the threshold (NS) of power absorption capacity is an increasing function of the slope (P).

6. A control method according to claim 1, characterized in that the deviation (VS) from predetermined speed is between 5 and 10 km/h.

7. A control method according to claim 1, characterized in that the vehicle is equipped with a speed-governing system.

8. A system for control of an automatic transmission (3) of a vehicle provided with an engine (2) that drives the transmission (3), the system being provided with:

- means for identifying a downhill-travel situation of the vehicle, and
- means for choosing a transmission ratio so that the engine absorbs energy,

characterized in that it is additionally provided with:

- means for measuring and storing in memory the longitudinal speed ( $V_{min}$ ) when the vehicle begins a downhill-travel situation,
- means for comparing the current speed ( $V$ ) of the vehicle with the speed ( $V_{min}$ ) at the beginning of downhill travel, and;
- means for instructing the transmission to initiate downshifting if the current speed ( $V$ ) exceeds the speed ( $V_{min}$ ) at the beginning of downhill travel by a predetermined deviation ( $V_S$ ).

9. A vehicle provided with an engine and an automatic transmission, characterized in that it is provided with the system according to claim 8 for control of the automatic transmission.